

**WHAT IS CLAIMED IS:**

1. A method for manufacturing a semiconductor device comprising the steps of:

forming a polysilicon film including a first portion doped with impurities at a first impurity concentration and a second portion doped with impurities at a second impurity concentration which is lower than said first impurity concentration; and

selectively etching said first portion of said polysilicon film by using a first etching condition and said second portion of said polysilicon film by using a second etching condition to thereby form gate electrodes from said first and second portions of said polysilicon film, said first etching condition generating a less amount of side etching compared to said second etching condition.

2. The method according to claim 1, wherein said polysilicon film includes said first and second portions in each of an nMOS area and a pMOS area, and is doped with n-type impurity ions in said nMOS area and doped with p-type impurity ions in said pMOS area.

3. The method according to claim 1, further comprising the step of forming an anti-reflection film on said polysilicon film before said selectively etching step.

4. The method according to claim 3, wherein said anti-reflection film

includes an organic resin.

5. The method according to claim 1, wherein said first etching condition uses CF-based etching gas.

6. The method according to claim 5, wherein said CF-based etching gas includes  $\text{CF}_4$ ,  $\text{CHF}_3$  and/or  $\text{CH}_2\text{F}_2$ .

7. The method according to claim 5, wherein said first etching condition includes an ambient pressure of 3 to 20 mTorr, a source power of 200 to 600 watts, a bias power of 20 to 150 watts, and a volume ratio of said CF-based gas to total gas at 75% or more.

8. The method according to claim 5, wherein said second etching condition uses  $\text{Cl}_2/\text{O}_2$ ,  $\text{HBr}/\text{O}_2$ ,  $\text{Cl}_2/\text{HBr}/\text{O}_2$ ,  $\text{Cl}_2/\text{HBr}/\text{CF}_4$ , or  $\text{Cl}_2/\text{HBr}/\text{CF}_4/\text{O}_2$ .